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New spiro-naphthopyran cpd. cpds. - useful as photochromic materials
developing colour by UV light

Patent Assignee: TORAY IND INC (TORA)

Number of Countries: 001 Number of Patents: 001

10 Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|-------------|------|----------|-------------|------|----------|----------|
| JP 62195383 | A | 19870828 | JP 8635323 | A | 19860221 | 198740 B |

Priority Applications (No Type Date): JP 8635323 A 19860221

15 Patent Details:

| Patent No | Kind | Lan Pg | Main IPC | Filing Notes |
|-------------|------|--------|----------|--------------|
| JP 62195383 | A | 5 | | |

Abstract (Basic): JP 62195383 A

20 Sprionaphthopyran cpds of formula (I) are new each R2-R5 are each 1
1-4C alkyl, halogen-substd. 1-2C alkyl, 1-4C alkoxyl, halogen or nitro,
each 1 and n = an integer of 0-2, each m and t = an integer of 0-4 and
R' = 1-20C alkyl opt. substd., 3-10C cycloalkyl opt. substd., 7-20C
aralkyl opt. substd. or 6-14C aryl opt. substd.

25 USE/ADVANTAGE - (I) are useful as photochromic materials with
fatigue resistance of colour development and disappearance for
printing, photography, optical equipment, recording, clothes and
ornaments capable of colour development by UV light irradiation.

30 In an example, a soln. of 5g 1,3,3-trimethyl- 2-methylenebenz (g)
indoline and 5g 2-hydroxy-1-naphthaldehyde in 100 ml ethanol was
refluxed for 2 hours in N2 flow and the reaction soln. was cooled,
precipitating. To the precipitate, was added a small amt of ethanol and
the mixt is filtered. The crude crystals were dissolved in ethanol, the
soln was heated to 50-60 deg C, to the soln., was added 10g active
35 carbon and the mixt was stirred and filtered. The filtrate is
concentrated and the obtd solid was recrystallised from ethanol to give
1,3,3-trimethylspiro (benz (g) indoline-2,3' -(3H)-naphtho(2,1-b)pyran)
with a m.pt. of 204 deg.C.

40 Title Terms: NEW; SPIRO; NAPHTHO; PYRAN; COMPOUND; COMPOUND; USEFUL;
PHOTOCHROMIC; MATERIAL; DEVELOP; COLOUR; ULTRAVIOLET; LIGHT

Derwent Class: E13; E24; G06

International Patent Class (Additional): C07D-491/10; C09K-009/00

File Segment: CPI

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